

WHAT IS CLAIMED IS:

1 1. A method for processing Input/Output (I/O) requests to a storage network
2 including at least one storage device and at least two adaptors, wherein each adaptor is
3 capable of communicating I/O requests to the at least one storage device, comprising:
4 detecting an error in a system including a first adaptor, wherein the first adaptor is
5 capable of communicating on the storage network after the error is detected;
6 in response to detecting the error, initiating a monitoring state to monitor I/O
7 requests transmitted through a second adaptor;
8 in response to receiving an I/O request, starting an I/O delay timer that is less than
9 a system timeout period, wherein an error recovery procedure in the system including the
10 first adaptor would be initiated after the system timeout period has expired; and
11 sending a reset request to the first adaptor in response to detecting an expiration
12 of one started I/O delay timer.

1 2. The method of claim 1, wherein the detected error indicates that the first
2 adaptor is unable to communicate to the system housing the first adaptor.

1 3. The method of claim 1, wherein I/O requests continue to be processed
2 through the second adaptor until the reset request is sent.

1 4: The method of claim 1, further comprising:
2 starting a monitoring timer equivalent to the system timeout period after detecting
3 the error at the first adaptor; and
4 terminating the monitoring state and any pending I/O delay timers after the
5 monitoring timer expires.

1 5. The method of claim 1, wherein sending the reset request further
2 comprises:

3 issuing a get identifier request to obtain an identifier of the first adaptor, wherein
4 the reset request is sent to the obtained identifier if the identifier is returned in response
5 to the get identifier request.

1 6. The method of claim 5, further comprising:
2 terminating the monitoring state and any pending I/O delay timers after sending
3 the reset request.

1 7. The method of claim 5, further comprising:
2 issuing another get identifier request to the first adaptor if a previous get identifier
3 request failed.

1 8. The method of claim 5, further comprising:
2 starting a monitoring timer equivalent to the adaptor timeout period after
3 detecting the error at the first adaptor;
4 beginning a process to issue an additional get identifier request to the first adaptor
5 if any previous get identifier request failed; and
6 terminating the monitoring state, any pending I/O delay timers, and the process to
7 issue additional get identifier requests after an expiration of the monitoring timer.

1 9. The method of claim 1, wherein the steps of initiating a monitoring state,
2 starting the I/O delay timer and sending the reset request are performed by a device
3 driver executing in an operating system.

1 10. The method of claim 9, wherein the system including the first adaptor is a
2 first system, wherein the device driver and the operating system are in a second system.

1 11. The method of claim 9, wherein the second adaptor is within the system
2 including the first adaptor, and wherein the reset causes a reset of the first adaptor.

1 12. The method of claim 11, wherein the reset of the first adaptor does not
2 effect the second adaptor.

1 13. The method of claim 1, wherein the storage network on which the
2 adaptors and storage devices communicate comprises a loop topology.

1 14. The method of claim 13, wherein the adaptors and storage devices
2 communicate using the Serial Storage Architecture (SSA) protocol.

1 15. The method of claim 1, wherein the detected error indicates an error
2 within the first adaptor.

1 16. The method of claim 1, wherein the reset causes a reset of the first adaptor
2 and not other components within the system including the first adaptor.

1 17. The method of claim 1, wherein the reset causes a power cycle of the
2 system including the first adaptor.

1 18. A system for processing Input/Output (I/O) requests to a storage network
2 including at least one storage device and a system including a first adaptor capable of
3 communicating I/O requests to at least one storage device, wherein the system including
4 the first adaptor initiates an error recovery procedure after a system timeout period has
5 expired, comprising:
6 a second adaptor capable of communicating on the storage network;
7 means for detecting an error in the system including the first adaptor, wherein the
8 first adaptor is capable of communicating on the storage network after the error is
9 detected;
10 means for initiating a monitoring state to monitor I/O requests transmitted
11 through a second adaptor in response to detecting the error;

12 means for starting an I/O delay timer that is less than a system timeout period in
13 response to receiving an I/O request; and

14 means for sending a reset request to the first adaptor in response to detecting an
15 expiration of one started I/O delay timer.

1 19. The system of claim 18, wherein the detected error indicates that the first
2 adaptor is unable to communicate to the system housing the first adaptor.

1 20. The system of claim 18, wherein I/O requests continue to be processed
2 through the second adaptor until the reset request is sent.

1 21. The system of claim 18, further comprising:
2 means for starting a monitoring timer equivalent to the system timeout period
3 after detecting the error at the first adaptor; and
4 means for terminating the monitoring state and any pending I/O delay timers after
5 the monitoring timer expires.

1 22. The system of claim 18, wherein the means for sending the reset request
2 further performs:
3 issuing a get identifier request to obtain an identifier of the first adaptor, wherein
4 the reset request is sent to the obtained identifier if the identifier is returned in response
5 to the get identifier request.

1 23. The system of claim 22, further comprising:
2 means for terminating the monitoring state and any pending I/O delay timers after
3 sending the reset request.

1 24. The system of claim 22, further comprising:
2 means for issuing another get identifier request to the first adaptor if a previous
3 get identifier request failed.

1 25. The system of claim 22, further comprising:
2 means for starting a monitoring timer equivalent to the adaptor timeout period
3 after detecting the error at the first adaptor;
4 means for beginning a process to issue an additional get identifier request to the
5 first adaptor if any previous get identifier request failed; and
6 means for terminating the monitoring state, any pending I/O delay timers, and the
7 process to issue additional get identifier requests after an expiration of the monitoring
8 timer.

1 26. The system of claim 18, further comprising:
2 an operating system; and
3 a device driver executing in the operating system, wherein the steps of initiating a
4 monitoring state, starting the I/O delay timer and sending the reset request are performed
5 by the device driver.

1 27. The system of claim 26, wherein the system including the first adaptor is a
2 separate system accessible over the storage network.

1 28. The system of claim 26, wherein the second adaptor is within the system
2 including the first adaptor, and wherein the reset causes a reset of the first adaptor.

1 29. The system of claim 28, wherein the reset of the first adaptor does not
2 effect the second adaptor.

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1 30. The system of claim 18, wherein the storage network on which the
2 adaptors and storage devices communicate comprises a loop topology.

1 31. The system of claim 30, wherein the adaptors and storage devices
2 communicate using the Serial Storage Architecture (SSA) protocol.

1 32. The system of claim 18, wherein the detected error indicates an error
2 within the first adaptor.

1 33. The system of claim 18, wherein the reset causes a reset of the first
2 adaptor and not other components within the system including the first adaptor.

1 34. The system of claim 18, wherein the reset causes a power cycle of the
2 system including the first adaptor.

1 35. An article of manufacture including code for processing Input/Output
2 (I/O) requests to a storage network including at least one storage device and at least two
3 adaptors, wherein each adaptor is capable of communicating I/O requests to the at least
4 one storage device, wherein the code is capable of causing operations to be performed
5 comprising:
6 detecting an error in a system including a first adaptor, wherein the first adaptor is
7 capable of communicating on the storage network after the error is detected;
8 in response to detecting the error, initiating a monitoring state to monitor I/O
9 requests transmitted through a second adaptor;
10 in response to receiving an I/O request, starting an I/O delay timer that is less than
11 a system timeout period, wherein an error recovery procedure in the system including the
12 first adaptor would be initiated after the system timeout period has expired; and
13 sending a reset request to the first adaptor in response to detecting an expiration
14 of one started I/O delay timer.

1 36. The system of claim 35, wherein the detected error indicates that the first
2 adaptor is unable to communicate to the system housing the first adaptor.

1 37. The system of claim 35, wherein I/O requests continue to be processed
2 through the second adaptor until the reset request is sent.

1 38. The system of claim 35, further comprising:
2 starting a monitoring timer equivalent to the system timeout period after detecting
3 the error at the first adaptor; and
4 terminating the monitoring state and any pending I/O delay timers after the
5 monitoring timer expires.

1 39. The system of claim 35, wherein sending the reset request further
2 comprises:
3 issuing a get identifier request to obtain an identifier of the first adaptor, wherein
4 the reset request is sent to the obtained identifier if the identifier is returned in response
5 to the get identifier request.

1 40. The system of claim 39, further comprising:
2 terminating the monitoring state and any pending I/O delay timers after sending
3 the reset request.

1 41. The system of claim 39, further comprising:
2 issuing another get identifier request to the first adaptor if a previous get identifier
3 request failed.

1 42. The system of claim 39, further comprising:
2 starting a monitoring timer equivalent to the adaptor timeout period after
3 detecting the error at the first adaptor;

4 beginning a process to issue an additional get identifier request to the first adaptor
5 if any previous get identifier request failed; and
6 terminating the monitoring state, any pending I/O delay timers, and the process to
7 issue additional get identifier requests after an expiration of the monitoring timer.

1 43. The system of claim 35, wherein the steps of initiating a monitoring state,
2 starting the I/O delay timer and sending the reset request are performed by a device
3 driver executing in an operating system.

1 44. The system of claim 43, wherein the system including the first adaptor is a
2 first system, wherein the device driver and the operating system are in a second system.

1 45. The system of claim 43, wherein the second adaptor is within the system
2 including the first adaptor, and wherein the reset causes a reset of the first adaptor.

1 46. The system of claim 45, wherein the reset of the first adaptor does not
2 effect the second adaptor.

1 47. The system of claim 35, wherein the storage network on which the
2 adaptors and storage devices communicate comprises a loop topology.

1 48. The system of claim 47, wherein the adaptors and storage devices
2 communicate using the Serial Storage Architecture (SSA) protocol.

1 49. The system of claim 35, wherein the detected error indicates an error
2 within the first adaptor.

1 50. The system of claim 35, wherein the reset causes a reset of the first
2 adaptor and not other components within the system including the first adaptor.

- 1 51. The system of claim 35, wherein the reset causes a power cycle of the
- 2 system including the first adaptor.

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